I am writing to oppose the reasoning behind NPRM 02-33, "Appropriate Framework for Broadband Access to the Internet over Wireline Facilities", because I am afraid that treating broadband Internet access as an information service (as proposed by NPRM 02-33) would deprive United States citizens of the single most important feature of the Internet that has made it such a runaway success over the last decade.

Let me introduce myself. I have a Ph.D. in Biology from the California Institute of Technology, where I studied human speech. I spent 12 years, 1985-1998, at AT&T Bell Labs, where I served as Distinguished Member of Technical Staff. Today, I make my living as an independent commentator on telecommunications. While I serve on numerous advisory boards and have numerous clients, I am beholden to no commercial interests. I am writing as a concerned citizen of the United States, and I am writing with hope that recent great advances in communications technology -- and, more importantly, in network architecture -- will become available to all.

In my understanding, "access" involves connecting my computer (and other digital communications devices) to the Internet. "Information" is quite different -- information is in the ones and zeros that enter my computer to be processed by it. Information can flow into my devices over a variety of "access" -- over a wire, over a cable, over an optical fiber, or through the air (either as radio-frequency energy, or as light-wave energy). That is, the same sequence of ones and zeros can enter my computer by any of these access methods. So to equate "access" with "information", as does NPRM 02-33, is simply incorrect.

It was not always so. The telephone network was developed to deliver one kind of information -- the human voice. It was engineered for voice, and it gave access to voice. Everything else that it carried (e.g., touch tones, modem signals, signalling information to set up telephone calls) was either an exception, or an adjunct to voice telephony. The wire that came into the house could not be distinguished from the service it provided. It was the same for television and radio -- each had its own dedicated infrastructure (be it a wire or a frequency band) to carry a specific type of information.

The great advance of the Internet was that its fundamental architecture separated "access" from "information". Any one of the various forms of access to the Internet puts one in touch with an infinite array of information. Furthermore, providers of this information (information service providers) do not own special infrastructure -- all they need is a server and any of the several methods of Internet access. As a result, the Internet is wide-open to innovation, and we have applications and services like email, Web browsing (in all its manifestations), ecommerce, Internet telephony, streaming audio and video, chat and instant messaging.

Not a single one of these information (and communications) services was brought to market by a telephone company or a television company or a cable operator or a broadcast radio network. No, access is a fundamentally different business from "information service". To equate "broadband access" and "information service" -- as NPRM 02-33 proposes -- would be a horrendous step backwards.

Without separation, "broadband access" as an "information service" is likely to resemble the failed Interactive TV experiments of the early 1990s. TV-on-speed is not "the Internet" -- and vice versa.

David S. Isenberg

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